

CVForge

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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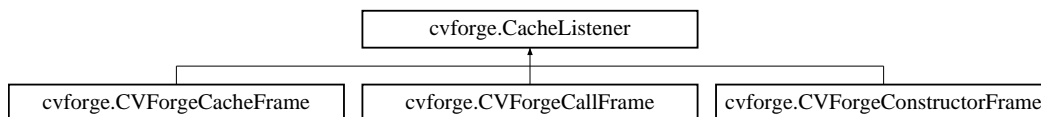
Chapter 3

Class Documentation

3.1 cvforge.CacheListener Interface Reference

Interface for notifying classes depending on [CVForgeCache](#).

Inheritance diagram for cvforge.CacheListener:



Public Member Functions

- void [cacheChanged](#) ()
Called when [CVForgeCache](#) experiences additions or removals of elements.

3.1.1 Detailed Description

Interface for notifying classes depending on [CVForgeCache](#).

Registers classes implementing this interface in [CVForgeCache](#) to make them aware of cache cahnges.

The documentation for this interface was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CacheListener.java

3.2 cvforge.ConfigIO Class Reference

Stupid configloader.

Static Public Member Functions

- static HashMap< String, String > [loadConfig](#) (String path, String sep)
Strips config files of whitespace and tabs, then reads them into a HashMap.
- static HashMap< String, String > **loadConfig** (String path)
- static void [writeConfig](#) (HashMap< String, String > params, String path, String sep)
Write HashMap to config file.
- static void **writeConfig** (HashMap< String, String > params, String path)

3.2.1 Detailed Description

Stupid configloader.

3.2.2 Member Function Documentation

3.2.2.1 static `HashMap<String, String> cvforge.ConfigIO.loadConfig (String path, String sep)` [static]

Strips config files of whitespace and tabs, then reads them into a HashMap.

Reads config files of structure:

this line is a comment

number = 512 text = a very long text Lines starting with # are ignored (use these for comments).

Parameters

<i>path</i>	Path to file.
<i>sep</i>	Separator to be used; e.g. "=" in example above.

Returns

HashMap containing parameters.

3.2.2.2 static void `cvforge.ConfigIO.writeConfig (HashMap< String, String > params, String path, String sep)` [static]

Write HashMap to config file.

Parameters

<i>params</i>	HashMAp with keys and values for parameters.
<i>path</i>	Path to target file.
<i>sep</i>	Separator like "="

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/ConfigIO.java

3.3 cvforge.CVForge Class Reference

Load and cache all relevant structures.

Public Member Functions

- [CVForge \(\)](#)
Call initialization.
- void [init \(\)](#)
Initialization by loading config, finding jars, generating cache.
- [CVForgeClassLoader getClassLoader \(\)](#)
Return the internal ClassLoader.
- void [loadOpenCV](#) (String version) throws Exception
Loads the OpenCV jar identified by the argument.

- void [loadShards](#) ()
Load shards from plugin folder and hook them into the library tree.
- void [installOpenCV](#) (String path)
Install and remember OpenCV jar.
- void [saveSettings](#) ()
Dump config map in file defined by CONFIGPATH.
- String [activeLib](#) ()
Get name of currently loaded OpenCV lib.
- ArrayList< String > [availableLibs](#) ()
Get list of installed libraries.
- JTree [getLibraryTree](#) ()
Tree representation of loaded library and its methods.
- HashMap< String, Method > [getMethodCache](#) ()
Mapping of method name to method.
- HashMap< String, Class > [getClassCache](#) ()
Mapping of class name to class.
- void [setVerbose](#) (boolean v)
Enable to show error log popups in ImageJ.
- boolean [isVerbose](#) ()
Show if verbose error logs are enabled.
- Point [restoreWindowPosition](#) ()
Gets Frame position from config file.
- Dimension [restoreWindowSize](#) ()
Gets Frame size from config file.
- void [storeWindowDimensions](#) (Point pos, Dimension size)
Save position and size of frame in config file.

Static Public Member Functions

- static String [getPluginPath](#) ()
Utility to generate and fix path to ImageJ plugin directory.

Static Public Attributes

- static final String **SEP** = System.getProperty("file.separator")
- static final String **VERSION** = "CVForge 1.0"
- static final String **CONFIGFILE** = "cvforge.config"
- static final String **PLUGINDIR** = [getPluginPath](#)()
- static final String **BITS** = System.getProperty("sun.arch.data.model")
- static final String **OS** = System.getProperty("os.name")

Protected Member Functions

- void [loadConfig](#) (String path)
Load config file.
- void [generateLibraryTree](#) ()
Generate a JTree representation of the library based on the methodCache;.

Protected Attributes

- boolean **verbose** = true
- String **libPath** = null
- ArrayList< String > **libsAvailable**
- JTree **libTree**
- HashMap< String, Class > **classCache**
- HashMap< String, Method > **methodCache**
- HashMap< String, String > **config**
- [CVForgeClassLoader](#) **forgeLoader**

3.3.1 Detailed Description

Load and cache all relevant structures.

3.3.2 Member Function Documentation

3.3.2.1 String cvforge.CVForge.activeLib ()

Get name of currently loaded OpenCV lib.

Returns null, if none loaded/ available.

Returns

local path to currently loaded library, null else.

3.3.2.2 ArrayList<String> cvforge.CVForge.availableLibs ()

Get list of installed libraries.

Returns

Paths to known libraries.

3.3.2.3 HashMap<String, Class> cvforge.CVForge.getClassCache ()

Mapping of class name to class.

Returns

Generated cache of methods, granted a library has been loaded.

3.3.2.4 CVForgeClassLoader cvforge.CVForge.getClassLoader ()

Return the internal ClassLoader.

Use with caution, as modifications can potentially break IJ.

Returns

Internal ClassLoader.

3.3.2.5 JTree cvforge.CVForge.getLibraryTree ()

Tree representation of loaded library and its methods.

Returns

Generated JTree, granted that a library has been loaded.

3.3.2.6 HashMap<String, Method> cvforge.CVForge.getMethodCache ()

Mapping of method name to method.

Returns

Generated cache of methods, granted a library has been loaded.

3.3.2.7 static String cvforge.CVForge.getPluginPath () [static]

Utility to generate and fix path to ImageJ plugin directory.

Returns

Path to ImageJ plugin directory.

3.3.2.8 void cvforge.CVForge.installOpenCV (String path)

Install and remember OpenCV jar.

The path to the jar will be stored in the config file once the plugin saves.

See also

[CVInstaller.installOpenCV\(\)](#)

Parameters

<i>path</i>	Path to OpenCV jar.
-------------	---------------------

3.3.2.9 boolean cvforge.CVForge.isVerbose ()

Show if verbose error logs are enabled.

Returns

True, if verbose messages enabled.

3.3.2.10 void cvforge.CVForge.loadConfig (String path) [protected]

Load config file.

Parameters

<i>path</i>	
-------------	--

3.3.2.11 void cvforge.CVForge.loadOpenCV (String *version*) throws Exception

Loads the OpenCV jar identified by the argument.

Generate library tree and method cache on-the-fly.

See also

[generateMethodCache\(\)](#)

[generateLibraryTree\(\)](#)

Parameters

<i>version</i>	Library version/ path to load.
----------------	--------------------------------

3.3.2.12 Point cvforge.CVForge.restoreWindowPosition ()

Gets Frame position from config file.

Returns

Stored Frame position from earlier session.

3.3.2.13 Dimension cvforge.CVForge.restoreWindowSize ()

Gets Frame size from config file.

Returns

Stored Frame size from earlier session.

3.3.2.14 void cvforge.CVForge.setVerbose (boolean *v*)

Enable to show error log popups in ImageJ.

Parameters

<i>v</i>	Set to true, if logs should be shown.
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3.3.2.15 void cvforge.CVForge.storeWindowDimensions (Point *pos*, Dimension *size*)

Save position and size of frame in config file.

Parameters

<i>pos</i>	Frame position to be stored.
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<i>size</i>	Frame size to be stored.
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The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForge.java

3.4 cvforge.CVForgeCache Class Reference

Cache for objects created e.g.

Public Member Functions

- void [addImageProcessor](#) (String name)
Add ImageProcessor to cache.
- void [addActiveImageProcessor](#) ()
Adds the current ImageProcessor to the cache.

Static Public Member Functions

- static JComboBox< String > [createComboBox](#) (Class classType)
Create a JComboBox containing all cached Objects of specified class.
- static void [add](#) (String name, Object obj)
Adds Object to the cache and associates it to name.
- static void [clear](#) ()
Remove all objects from cache.
- static Set< Entry< String, Object > > [getEntries](#) ()
Get Set of entries in cache.
- static int [size](#) ()
Get number of elements in cache.
- static Object [get](#) (String key)
Get entry from cache.
- static boolean [contains](#) (String key)
Check if item with given key exists in cache.
- static void [remove](#) (String key)
Remove entry denoted by key from cache.
- static void [update](#) (String key, Object value)
Update the given key-value pair.
- static boolean [isEmpty](#) ()
Check if cache is empty.
- static void [addListener](#) (CacheListener listener)
Register given listener s.t.

Static Protected Member Functions

- static void [notifyListeners](#) ()
Notify all registered CacheListeners.

Static Protected Attributes

- static HashMap< String, Object > **cache** = new HashMap<String, Object>()
- static LinkedList< [CacheListener](#) > **listeners** = new LinkedList<[CacheListener](#)>()

3.4.1 Detailed Description

Cache for objects created e.g.
by the CVForgeConstructor or method calls.

3.4.2 Member Function Documentation

3.4.2.1 static void cvforge.CVForgeCache.add (String *name*, Object *obj*) [static]

Adds Object to the cache and associates it to name.

Parameters

<i>name</i>	The name to associate.
<i>obj</i>	Object to add to cache.

3.4.2.2 void cvforge.CVForgeCache.addImageProcessor (String *name*)

Add ImageProcessor to cache.

Parameters

<i>ip</i>	ImageProcessor to add.
-----------	------------------------

3.4.2.3 static void cvforge.CVForgeCache.addListener ([CacheListener](#) *listener*) [static]

Register given listener s.t.
it gets notified if the cache changes.

Parameters

<i>listener</i>	CacheListener to register.
-----------------	--

3.4.2.4 static boolean cvforge.CVForgeCache.contains (String *key*) [static]

Check if item with given key exists in cache.

Parameters

<i>key</i>	Key to check for.
------------	-------------------

Returns

true, if cached object with such key exists.

3.4.2.5 static JComboBox<String> cvforge.CVForgeCache.createComboBox (Class *classType*) [static]

Create a JComboBox containing all cached Objects of specified class.

Parameters

<i>classType</i>	Type of objects to display in ComboBox. Enter Object.class to list entire cache.
------------------	--

Returns

Constructed JComboBox.

3.4.2.6 static Object cvforge.CVForgeCache.get (String key) [static]

Get entry from cache.

Parameters

<i>key</i>	Key/ name of entry.
------------	---------------------

Returns

Cached entry if found, null else.

3.4.2.7 static Set<Entry<String, Object> > cvforge.CVForgeCache.getEntries () [static]

Get Set of entries in cache.

Returns

Set of cache entries.

3.4.2.8 static boolean cvforge.CVForgeCache.isEmpty () [static]

Check if cache is empty.

Returns

true, if cache is empty.

3.4.2.9 static void cvforge.CVForgeCache.remove (String key) [static]

Remove entry denoted by key from cache.

Parameters

<i>key</i>	Key identifying object to be removed.
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3.4.2.10 static int cvforge.CVForgeCache.size () [static]

Get number of elements in cache.

Returns

Size of cache.

3.4.2.11 static void cvforge.CVForgeCache.update (String key, Object value) [static]

Update the given key-value pair.

Parameters

<i>key</i>	Key for update.
<i>value</i>	Object to be reassigned to key.

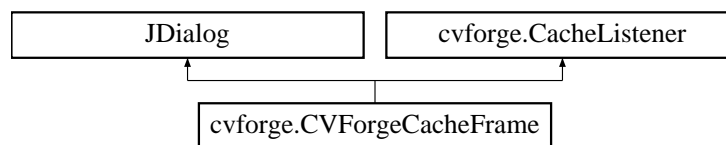
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForgeCache.java

3.5 cvforge.CVForgeCacheFrame Class Reference

Provide cache for objects.

Inheritance diagram for cvforge.CVForgeCacheFrame:



Public Member Functions

- void **createCacheList** ()
- void **cacheChanged** ()
Update GUI elements.

Protected Attributes

- JScrollPane **scrollPane**
- JPanel **mainPanel**
- JButton **clearButton**

3.5.1 Detailed Description

Provide cache for objects.

3.5.2 Member Function Documentation

3.5.2.1 void cvforge.CVForgeCacheFrame.cacheChanged ()

Update GUI elements.

See also

[CacheListener](#)

Implements [cvforge.CacheListener](#).

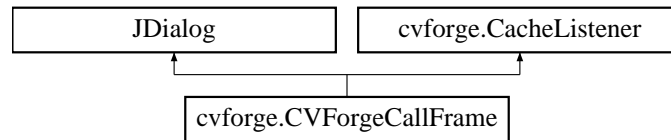
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForgeCacheFrame.java

3.6 cvforge.CVForgeCallFrame Class Reference

Frame providing a visual interface for setting parameters of a method call.

Inheritance diagram for cvforge.CVForgeCallFrame:



Public Member Functions

- void [createParameterList](#) (Method method)
Create GUI elements for parameters.
- String [getMethodArgs](#) ()
Creates an argument String for macro recording.
- Object[] [extractParameters](#) ()
Get parameters from JComponents.
- Method [getActiveMethod](#) ()
Get currently assigned method.
- boolean [hasReturnValue](#) ()
Determine if method is void or has return type.
- String [getReturnName](#) ()
Gets the name which will be assigned to the returned object for caching.
- void [addExternalButtonListener](#) (ActionListener listener)
Add external listener to detect if call button has been pressed.
- void [cacheChanged](#) ()
Called when [CVForgeCache](#) experiences additions or removals of elements.

Protected Attributes

- Method **activeMethod**
- ArrayList< JComponent > **components** = new ArrayList<JComponent>()
- JTextField **outputField** = new JTextField()
- JLabel **outputLabel** = new JLabel(" name for cache: ")
- JPanel **elementPanel** = new JPanel()
- JButton **callButton** = new JButton("call")

3.6.1 Detailed Description

Frame providing a visual interface for setting parameters of a method call.

This Frame does not call the method by itself, but rather only provides a user interface for calling it.

3.6.2 Member Function Documentation

3.6.2.1 void cvforge.CVForgeCallFrame.addExternalButtonListener (ActionListener listener)

Add external listener to detect if call button has been pressed.

Parameters

<i>listener</i>	ActionListener to assign to button.
-----------------	-------------------------------------

3.6.2.2 void cvforge.CVForgeCallFrame.createParameterList (Method *method*)

Create GUI elements for parameters.

Also adds a field for naming, if the method has a return value which can be cached.

Parameters

<i>method</i>	Method for which a GUI is supposed to be created.
---------------	---

3.6.2.3 Object [] cvforge.CVForgeCallFrame.extractParameters ()

Get parameters from JComponents.

Returns

Array of objects (Integer, Double, String, ...) which are suitable parameters.

3.6.2.4 Method cvforge.CVForgeCallFrame.getActiveMethod ()

Get currently assigned method.

Returns

Method assigned to this [CVForgeCallFrame](#).

3.6.2.5 String cvforge.CVForgeCallFrame.getMethodArgs ()

Creates an argument String for macro recording.

Returns

String with macro arguments.

3.6.2.6 String cvforge.CVForgeCallFrame.getReturnName ()

Gets the name which will be assigned to the returned object for caching.

Empty String, if the active method is of type void.

Returns

Name for caching the return value.

3.6.2.7 boolean cvforge.CVForgeCallFrame.hasReturnValue ()

Determine if method is void or has return type.

Returns

false, if the active method is void.

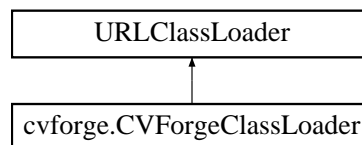
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForgeCallFrame.java

3.7 cvforge.CVForgeClassLoader Class Reference

Used to replace ImageJ PluginClassLoader.

Inheritance diagram for cvforge.CVForgeClassLoader:

**Public Member Functions**

- void [loadIJ](#) ()
Hook definitions for ImageJ classes into loader.
- void [addURL](#) (String path) throws MalformedURLException
Add classes in path to defined classes.
- void [addURL](#) (URL url)
Add classes in url to defined classes.

Static Protected Attributes

- static final String **PLUGINDIR** = CVForge.PLUGINDIR

3.7.1 Detailed Description

Used to replace ImageJ PluginClassLoader.

Keeps classinformation up-to-date. Has method for adding new classes. Mainly used to avoid "jar hell" problem, where multiple definitions of opencv may not be loaded simultaneously.

3.7.2 Member Function Documentation

3.7.2.1 void cvforge.CVForgeClassLoader.addURL (String path) throws MalformedURLException

Add classes in path to defined classes.

Should point to jar file.

Parameters

<i>path</i>	Path to jar.
-------------	--------------

Returns

true, if loading successful.

3.7.2.2 void cvforge.CVForgeClassLoader.addURL (URL url)

Add classes in url to defined classes.

Should point to jar file.

Parameters

<i>url</i>	URL to jar.
------------	-------------

Returns

true, if loading successful.

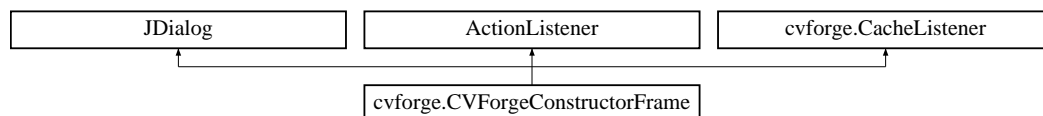
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForgeClassLoader.java

3.8 cvforge.CVForgeConstructorFrame Class Reference

Provide cache for objects and notify listeners if new objects have been added.

Inheritance diagram for cvforge.CVForgeConstructorFrame:

**Public Member Functions**

- void [setClassCache](#) (HashMap< String, Class > classes)
Set the cache of available classes.
- void [createConstructorLists](#) (Class template)
Create GUI elements for the constructors of this Class.
- Object[] [extractParameters](#) ()
Get parameters from textfields.
- Constructor [getActiveConstructor](#) ()
Determine which Constructor is now in use.
- void [createObject](#) ()
Creates an Object based on the parameters extracted from the GUI.
- void [actionPerformed](#) (ActionEvent ev)
Called, if JComboBox item changed.
- void [cacheChanged](#) ()
Called when CVForgeCache experiences additions or removals of elements.

Protected Attributes

- Class **templateClass**
- Constructor[] **constructors**
- ArrayList< JComponent[]> **components** = new ArrayList<JComponent[]>()
- JTabbedPane **tabs** = new JTabbedPane()
- JComboBox< String > **classBox**
- JPanel **outputPanel** = new JPanel()
- JLabel **outputLabel** = new JLabel(" name: ")
- JTextField **outputField** = new JTextField()
- JButton **createButton** = new JButton("create")
- HashMap< String, Class > **classCache**

3.8.1 Detailed Description

Provide cache for objects and notify listeners if new objects have been added.

3.8.2 Member Function Documentation

3.8.2.1 void cvforge.CVForgeConstructorFrame.createConstructorLists (Class *template*)

Create GUI elements for the constructors of this Class.

Parameters

<i>templateClass</i>	Class for whose constructors the GUI elements are to be created.
----------------------	--

3.8.2.2 void cvforge.CVForgeConstructorFrame.createObject ()

Creates an Object based on the parameters extracted from the GUI.

Adds this Object immediately to the cache.

3.8.2.3 Object [] cvforge.CVForgeConstructorFrame.extractParameters ()

Get parameters from textfields.

Returns

Array of objects (Integer, Double, String, ...) with suitable paramters.

3.8.2.4 Constructor cvforge.CVForgeConstructorFrame.getActiveConstructor ()

Determine which Constructor is now in use.

Returns

Constructor which is currently active.

3.8.2.5 void cvforge.CVForgeConstructorFrame.setClassCache (HashMap< String, Class > *classes*)

Set the cache of available classes.

These classes will be displayed in the JComboBox at the Frame's top. The cache will also be used to lookup class properties.

Parameters

<i>classes</i>	The new classes.
----------------	------------------

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForgeConstructorFrame.java

3.9 cvforgeconversion.CVForgeConverter Class Reference

Converters for ImageJ objects and OpenCV objects.

Static Public Member Functions

- static int [toCvType](#) (ImageProcessor ip)
TODO replace this by upper method Get OpenCV Mat type corresponding to given ImageProcessor.
- static Mat [createCompatibleMat](#) (ImageProcessor ip)
Creates a Mat which has the same size and type as the ImageProcessor.
- static ImageProcessor [createCompatibleProcessor](#) (Mat cvmat)
Creates an ImageProcessor which has the same size and type as the Mat.
- static void [cv2ij](#) (Rect cvrect, Roi roi)
Convert Rect to Roi.
- static void [ij2cv](#) (Roi roi, Rect cvrect)
Convert Roi to Rect.
- static void [ij2cv](#) (Roi roi, Size size)
Convert Roi to Rect.
- static void [ij2cv](#) (Roi roi, RotatedRect cvrect)
Convert Roi to Rect.
- static void [ij2cv](#) (ImageProcessor ip, Mat cvmat)
Convert ImageProcessor to Mat.
- static void [cv2ij](#) (Mat cvmat, ImageProcessor ip, int offsetX, int offsetY)
Convert Mat to ImageProcessor.
- static void [cv2ij](#) (Mat cvmat, ImageProcessor ip)
Convert Mat to ImageProcessor.
- static void [toResultTable](#) (float[][] array, ResultsTable table)
Convert raw array to ImageJ result table.

Static Protected Member Functions

- static void [toColorMat](#) (ColorProcessor ip, Mat cvmat)
Helper for conversion of ColorProcessor to Mat.
- static void [toGrayProcessor](#) (Mat cvmat, ImageProcessor ip, int offsetX, int offsetY)
Conversion method for generic gray-value ImageProcessors.
- static void [toGrayProcessor](#) (Mat cvmat, ImageProcessor ip)
Conversion method for generic gray-value ImageProcessors.
- static void [toColorProcessor](#) (Mat cvmat, ColorProcessor ip, int offsetX, int offsetY)
Helper for conversion of Mat to ColorProcessor.
- static void [toColorProcessor](#) (Mat cvmat, ColorProcessor ip)
Overloaded method, if cvmat is not a submatrix.

Static Protected Attributes

- static final int **CV_8UC3** = 16
- static final int **CV_8U** = CvType.CV_8U
- static final int **CV_16U** = CvType.CV_16U
- static final int **CV_32S** = CvType.CV_32S
- static final int **CV_32F** = CvType.CV_32F

3.9.1 Detailed Description

Converters for ImageJ objects and OpenCV objects.

These converters provide the "glue" necessary for ImageJ/OpenCV interop. This class is kept in a self-contained package to keep the CVForge core package clean and free of any direct dependency to OpenCV.

3.9.2 Member Function Documentation

3.9.2.1 static Mat cvforgeconversion.CVForgeConverter.createCompatibleMat (ImageProcessor *ip*) [static]

Creates a Mat which has the same size and type as the ImageProcessor.

Parameters

<i>ip</i>	ImageProcessor serving as a template for conversion.
-----------	--

Returns

Mat object with properties corresponding to the ImageProcessor.

3.9.2.2 static ImageProcessor cvforgeconversion.CVForgeConverter.createCompatibleProcessor (Mat *cvmat*) [static]

Creates an ImageProcessor which has the same size and type as the Mat.

Parameters

<i>cvmat</i>	Mat serving as a template for conversion.
--------------	---

Returns

ImageProcessor object with properties corresponding to the Mat.

3.9.2.3 static void cvforgeconversion.CVForgeConverter.cv2ij (Rect *cvrect*, Roi *roi*) [static]

Convert Rect to Roi.

Parameters

<i>cvrect</i>	Source OpenCV Rect object.
<i>roi</i>	Target ImageJ Roi object.

3.9.2.4 static void cvforgeconversion.CVForgeConverter.cv2ij (Mat *cvmat*, ImageProcessor *ip*, int *offsetX*, int *offsetY*) [static]

Convert Mat to ImageProcessor.

Resize ImageProcessor if necessary.

Parameters

<i>cvmat</i>	Input Mat.
<i>ip</i>	ImageProcessor in which to load cvmat.
<i>offsetX</i>	x origin of offset.
<i>offsetY</i>	y origin of offset.

Exceptions

<i>RuntimeException</i>	In case that Mat is of unknown or incompatible type.
-------------------------	--

3.9.2.5 static void cvforgeconversion.CVForgeConverter.cv2ij (Mat *cvmat*, ImageProcessor *ip*) [static]

Convert Mat to ImageProcessor.

Resize ImageProcessor if necessary.

Parameters

<i>cvmat</i>	Input Mat.
<i>ip</i>	ImageProcessor in which to load cvmat.

Exceptions

<i>RuntimeException</i>	In case that Mat is of unknown or incompatible type.
-------------------------	--

3.9.2.6 static void cvforgeconversion.CVForgeConverter.ij2cv (Roi *roi*, Rect *cvrect*) [static]

Convert Roi to Rect.

Parameters

<i>roi</i>	Source ImageJ Roi object.
<i>cvrect</i>	Target OpenCV Rect object.

3.9.2.7 static void cvforgeconversion.CVForgeConverter.ij2cv (Roi *roi*, Size *size*) [static]

Convert Roi to Rect.

Parameters

<i>roi</i>	Source ImageJ Roi object.
<i>cvrect</i>	Target OpenCV Rect object.

3.9.2.8 static void cvforgeconversion.CVForgeConverter.ij2cv (Roi *roi*, RotatedRect *cvrect*) [static]

Convert Roi to Rect.

Parameters

<i>roi</i>	Source ImageJ Roi object.
<i>cvrect</i>	Target OpenCV Rect object.

3.9.2.9 static void cvforgeconversion.CVForgeConverter.ij2cv (ImageProcessor *ip*, Mat *cvmat*) [static]

Convert ImageProcessor to Mat.

Resize and reformat Mat if necessary.

Parameters

<i>ip</i>	Input ImageProcessor.
<i>cvmat</i>	Mat to which which ip data is loaded.

Exceptions

<i>RuntimeException</i>	In case that ImagePlus is of unknown or incompatible type.
-------------------------	--

3.9.2.10 `static void cvforgeconversion.CVForgeConverter.toColorMat (ColorProcessor ip, Mat cvmat) [static], [protected]`

Helper for conversion of ColorProcessor to Mat.

Data layouts are different which is why we need to manually iterate over the underlying arrays.

Parameters

<i>ip</i>	ColorProcessor to convert.
<i>cvmat</i>	converted Mat

3.9.2.11 `static void cvforgeconversion.CVForgeConverter.toColorProcessor (Mat cvmat, ColorProcessor ip, int offsetX, int offsetY) [static], [protected]`

Helper for conversion of Mat to ColorProcessor.

Data layouts are different which is why we need to manually iterate over the underlying arrays. Offset values define are to be used if cvmat is actually a submatrix.

Parameters

<i>cvmat</i>	Mat to convert.
<i>ip</i>	converted ColorProcessor
<i>offsetX</i>	offset for copying data
<i>offsetY</i>	offset for copying data

3.9.2.12 `static void cvforgeconversion.CVForgeConverter.toColorProcessor (Mat cvmat, ColorProcessor ip) [static], [protected]`

Overloaded method, if cvmat is not a submatrix.

Parameters

<i>cvmat</i>	Mat to convert.
<i>ip</i>	converted ColorProcessor.

3.9.2.13 `static int cvforgeconversion.CVForgeConverter.toCvType (ImageProcessor ip) [static]`

TODO replace this by upper method Get OpenCV Mat type corresponding to given ImageProcessor.

Parameters

<i>ip</i>	
-----------	--

Returns

3.9.2.14 `static void cvforgeconversion.CVForgeConverter.toGrayProcessor (Mat cvmat, ImageProcessor ip, int offsetX, int offsetY)` `[static]`, `[protected]`

Conversion method for generic gray-value ImageProcessors.

Covers special case if cvmat is actually a submatrix of ip.

Parameters

<i>cvmat</i>	Mat to convert.
<i>ip</i>	converted ImageProcessor
<i>offsetX</i>	offset for copying data
<i>offsetY</i>	offset for copying data

3.9.2.15 `static void cvforgeconversion.CVForgeConverter.toGrayProcessor (Mat cvmat, ImageProcessor ip)` `[static]`, `[protected]`

Conversion method for generic gray-value ImageProcessors.

Covers special case if cvmat is actually a submatrix of ip. Offset values define are to be used if cvmat is actually a submatrix.

Parameters

<i>cvmat</i>	Mat to convert.
<i>ip</i>	converted ImageProcessor

3.9.2.16 `static void cvforgeconversion.CVForgeConverter.toResultTable (float array[][], ResultsTable table)` `[static]`

Convert raw array to ImageJ result table.

Parameters

<i>array</i>	
<i>table</i>	

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforgeconversion/CVForgeConverter.java

3.10 cvforgeconversion.CVForgeExecuter Class Reference

Execution module for OpenCV methods.

Static Public Member Functions

- static void [loadDll](#) (String path)
Must be called to load the OpenCV native library from current ClassLoader context.
- static void [execute](#) (Method m, Object[] args, String cacheTarget) throws Exception
Call this method by reflection.

3.10.1 Detailed Description

Execution module for OpenCV methods.

This module has a dependency to [CVForgeConverter](#) and OpenCV. It is self-contained to keep the CVForge core package clean and free of any direct dependency to OpenCV.

3.10.2 Member Function Documentation

3.10.2.1 `static void cvforgeconversion.CVForgeExecuter.execute (Method m, Object[] args, String cacheTarget) throws Exception` [static]

Call this method by reflection.

Parameters

<i>m</i>	Method to be called.
<i>args</i>	Arguments for method.
<i>cacheTarget</i>	Name to be used for caching. If empty String is given, the call result will not be added to CVForgeCache.

Exceptions

<i>Exception</i>	Exception thrown in case of invocation failure.
------------------	---

3.10.2.2 `static void cvforgeconversion.CVForgeExecuter.loadDll (String path)` [static]

Must be called to load the OpenCV native library from current ClassLoader context.

This method is located in this module since it is used by CVForge's own ClassLoader.

Parameters

<i>path</i>	Path to native library.
-------------	-------------------------

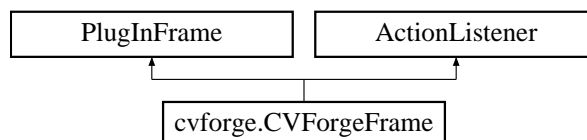
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforgeconversion/CVForgeExecuter.java

3.11 cvforge.CVForgeFrame Class Reference

Mainframe for library loading/ selection/ installation.

Inheritance diagram for cvforge.CVForgeFrame:



Classes

- class **Runner**

Public Member Functions

- void [loadLibraryTree](#) ()
If there active lib found, load the tree and set up user interface.

- void [setupTreeListener](#) ()
Initialize tree properties and add listener.
- void [pluginShutdown](#) ()
Saves plugin settings and shuts down smoothly.
- void [installJar](#) ()
Open up file dialog and install jar selected in JFileChooser.
- void [switchJar](#) (String path)
Switch to jar defined by path.
- void [filterTree](#) (String filter)
Filter library tree leaves with filter.
- void [actionPerformed](#) (ActionEvent e)
Launch method call.

Static Public Member Functions

- static void [showAbout](#) ()
Simple about text.
- static void [lockAllImages](#) ()
Lock all images for filtering.
- static void [unlockAllImages](#) ()
Unlock and update all images.

Static Public Attributes

- static [CVForge](#) **FORGE**

Protected Member Functions

- void [setupMenuBar](#) ()
Setup MenuBar and add installed jars to entries.

Protected Attributes

- [CVForgeCallFrame](#) **callFrame**
- [CVForgeCacheFrame](#) **cacheFrame**
- [CVForgeConstructorFrame](#) **conFrame**
- JTree **libTree**
- HashMap< String, Method > **methodCache**
- JScrollPane **libTreePane**
- MenuBar **menuBar**
- JTextField **textFieldFilter**
- JButton **buttonFilter**

3.11.1 Detailed Description

Mainframe for library loading/ selection/ installation.

Serves as hub for executing methods.

3.11.2 Member Function Documentation

3.11.2.1 void cvforge.CVForgeFrame.filterTree (String filter)

Filter library tree leaves with filter.

Nodes containing filter term are kept. Case insensitive!

Parameters

<i>filter</i>	Filter to use.
---------------	----------------

3.11.2.2 void cvforge.CVForgeFrame.switchJar (String path)

Switch to jar defined by path.

Parameters

<i>path</i>	Path to opencv jar file.
-------------	--------------------------

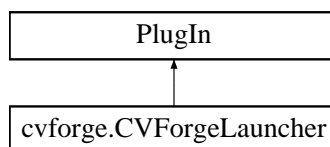
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForgeFrame.java

3.12 cvforge.CVForgeLauncher Class Reference

Launcher module creating either [CVForgeFrame](#) instance or setting up headless mode.

Inheritance diagram for cvforge.CVForgeLauncher:



Public Member Functions

- void [run](#) (String arg)
Inherited from PlugIn interface.

Static Public Attributes

- static [CVForgeFrame](#) **CVFORGEFRAME**

Protected Member Functions

- Method [getMethod](#) (String methodName, String[] methodArgs)
Get method corresponding to name and argument signature.
- String[] [extractArgs](#) (String arg)
Returns arguments for method call as array.
- Object[] [convertArguments](#) (Method method, String[] args)
TODO refac, CVCallFrame is doing something similar.

Protected Attributes

- String **methodName**
- String[] **methodArgs**

3.12.1 Detailed Description

Launcher module creating either [CVForgeFrame](#) instance or setting up headless mode.

[CVForgeFrame](#) is created in normal use case. Headless mode directly acts on submitted arguments and is used for macros. In both cases a OpenCV is loaded and methods are created and cached.

3.12.2 Member Function Documentation

3.12.2.1 `Object [] cvforge.CVForgeLauncher.convertArguments (Method method, String[] args)` [protected]

TODO refac, CVCallFrame is doing something similar.

Convert the arguments in preparation for method call.

Parameters

<i>method</i>	Method to be called.
<i>args</i>	Arguments to be converted to suitable method parameters.

Returns

Converted Objects for method call.

3.12.2.2 `String [] cvforge.CVForgeLauncher.extractArgs (String arg)` [protected]

Returns arguments for method call as array.

First element of array is method name itself.

Parameters

<i>arg</i>	Argument string from which single arguments are extracted.
------------	--

Returns

Arguments

3.12.2.3 `Method cvforge.CVForgeLauncher.getMethod (String methodName, String[] methodArgs)` [protected]

Get method corresponding to name and argument signature.

Parameters

<i>methodName</i>	Name of the method.
<i>methodArgs</i>	String representations of the argumetns.

Returns

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge/_src/cvforge/CVForgeLauncher.java

3.13 cvforge.CVForgeShard Interface Reference

Interface that needs to be overridden by Shards.

3.13.1 Detailed Description

Interface that needs to be overridden by Shards.

Does not contain any methods, but merely serves as an identifier recognized by [CVForge](#).

The documentation for this interface was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVForgeShard.java

3.14 cvforge.CVInstaller Class Reference

Utility functions for installing OpenCV jars and checking for installed OpenCV jars.

Static Public Member Functions

- static String[] [getInstalledOpenCV](#) ()
Check for installed versions of OpenCV and return their names.
- static boolean [installOpenCV](#) (String cvPath, [CVForgeClassLoader](#) loader)
Install jar from specified path in current active java directory.
- static File [checkForOpenCV](#) (String path)
Checks if given OpenCV directory contains OpenCV jar and x86/x64 subfolders.

Static Protected Member Functions

- static void [addClassPath](#) (String path) throws Exception
Add given path to java class path.

Static Protected Attributes

- static final String **SEP** = CVForge.SEP

3.14.1 Detailed Description

Utility functions for installing OpenCV jars and checking for installed OpenCV jars.

3.14.2 Member Function Documentation

3.14.2.1 static void cvforge.CVInstaller.addClassPath (String path) throws Exception [static], [protected]

Add given path to java class path.

Parameters

<i>path</i>	Path to add.
-------------	--------------

3.14.2.2 static File cvforge.CVInstaller.checkForOpenCV (String *path*) [static]

Checks if given OpenCV directory contains OpenCV jar and x86/x64 subfolders.

The path must identify the top folder of an OpenCV directory downloaded from the official OpenCV websites. The directory is expected to have the files/subfolders "build/java/opencv-xxx.jar", "build/java/x86", "build/java/x64".

Returns

File reference to java directory containing OpenCV jar and subfolders, null otherwise.

3.14.2.3 static String [] cvforge.CVInstaller.getInstalledOpenCV () [static]

Check for installed versions of OpenCV and return their names.

Looks in "JAVA_HOME/lib/ext" for opencv-xxx.jar files and lists them. Null, if none installed.

Returns

Names/ version numbers of installed OpenCV versions.

3.14.2.4 static boolean cvforge.CVInstaller.installOpenCV (String *cvPath*, CVForgeClassLoader *loader*) [static]

Install jar from specified path in current active java directory.

This actually copies the OpenCV jar and library files into the jre execution directory. Under regular conditions this would be a bad thing to do, but every package ImageJ comes with its own jre. However, this means that running ImageJ with a jre other than the one deployed with it, can lead to undesirable behaviour. Be sure that the jar installed by this method is in fact an OpenCV file!

Parameters

<i>cvPath</i>	Path to directory containing OpenCV jar and dll subdirectories.
---------------	---

Returns

false, if not successful.

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/CVInstaller.java

3.15 cvforge.Executer Class Reference

Static Public Member Functions

- static void [initCVForgeExecuter](#) (String *cvPath*, String *dllPath*, [CVForgeClassLoader](#) *loader*) throws Exception
Load OpenCV methods and native library.
- static void [executeMethod](#) (Method *m*, Object[] *args*, String *cacheTarget*) throws Exception
Execute given OpenCV method.
- static boolean [ready](#) ()
Check if CVForgeExecuter class and execute method loaded.

Static Protected Attributes

- static final String **SEP** = CVForge.SEP
- static final Class[] **SIG** = {Method.class, Object[].class, String.class}
- static Class **executer**
- static Method **execute**
- static URLClassLoader **classLoader**
- static ClassLoader **systemLoader** = ClassLoader.getSystemClassLoader()
- static final String **EXECUTERNAME** = "CVForgeExecuter"
- static final String **CONVERTERJAR** = "CVForgeConversion.jar"

3.15.1 Member Function Documentation

3.15.1.1 static void cvforge.Executer.executeMethod (Method *m*, Object[] *args*, String *cacheTarget*) throws Exception
[static]

Execute given OpenCV method.

Parameters

<i>m</i>	Method to execute.
<i>args</i>	Arguments for method.
<i>cacheTarget</i>	Destination for cache. Only relevant if method has return type.

Exceptions

<i>Exception</i>	Thrown, if execution fails.
------------------	-----------------------------

3.15.1.2 static void cvforge.Executer.initCVForgeExecuter (String *cvPath*, String *dllPath*, CVForgeClassLoader *loader*)
throws Exception [static]

Load OpenCV methods and native library.

Load CVForgeExecuter and its methods.

Parameters

<i>cvPath</i>	
---------------	--

Exceptions

<i>Exception</i>	
------------------	--

3.15.1.3 static boolean cvforge.Executer.ready () [static]

Check if CVForgeExecuter class and execute method loaded.

Returns

true, if CVForgeExecuter class and execute method loaded.

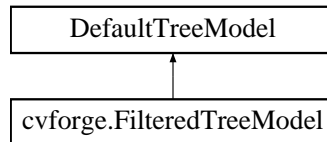
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/Executer.java

3.16 cvforge.FilteredTreeModel Class Reference

TreeModel which dynamically filters its nodes.

Inheritance diagram for cvforge.FilteredTreeModel:



Public Member Functions

- [FilteredTreeModel](#) (TreeNode root)
Create new TreeModel with given node.
- [FilteredTreeModel](#) (TreeNode root, boolean asksAllowsChildren)
Create new TreeModel with given node.
- [FilteredTreeModel](#) (TreeNode root, boolean asksAllowsChildren, String [filter](#))
Create new TreeModel with given node.
- Object [getChild](#) (Object parent, int index)
Get child node from parent.
- int [getChildCount](#) (Object parent)
Count number of children in node.
- void [setFilter](#) (String [filter](#))
Set new String for filtering nodes.

Protected Member Functions

- boolean [filterIsActive](#) ()
Check if filter exists.

Protected Attributes

- String [filter](#)
String for filtering.

3.16.1 Detailed Description

TreeModel which dynamically filters its nodes.

For use with JTree. Build a tree with [FilteredTreeNode](#) objects. Then assign the node to this model.

Sample: [FilteredTreeNode](#) root = new FilteredTreeNode(rootName); [FilteredTreeModel](#) model = new [FilteredTreeModel](#)(root, "my filter string"); JTree tree = new JTree(model);

3.16.2 Constructor & Destructor Documentation

3.16.2.1 cvforge.FilteredTreeModel.FilteredTreeModel (*TreeNode root*)

Create new TreeModel with given node.

Parameters

<i>root</i>	Root node for creation.
-------------	-------------------------

3.16.2.2 `cvforge.FilteredTreeModel.FilteredTreeModel (TreeNode root, boolean asksAllowsChildren)`

Create new TreeModel with given node.

Parameters

<i>root</i>	Root node for creation.
<i>asksAllowsChildren</i>	Allow children.

3.16.2.3 `cvforge.FilteredTreeModel.FilteredTreeModel (TreeNode root, boolean asksAllowsChildren, String filter)`

Create new TreeModel with given node.

Parameters

<i>root</i>	Root node for creation.
<i>asksAllowsChildren</i>	Allow children.
<i>filter</i>	String for filtering.

3.16.3 Member Function Documentation

3.16.3.1 `boolean cvforge.FilteredTreeModel.filterIsActive ()` [protected]

Check if filter exists.

Returns

true, if filter is non-empty.

3.16.3.2 `Object cvforge.FilteredTreeModel.getChild (Object parent, int index)`

Get child node from parent.

Respects filtering! Filtered nodes are excluded.

Parameters

<i>parent</i>	Parent node to retrieve child from.
<i>index</i>	Index of child of interest.

Returns

Selected child of parent node.

3.16.3.3 `int cvforge.FilteredTreeModel.getChildCount (Object parent)`

Count number of children in node.

Respects filtering! Filtered nodes are excluded.

Parameters

<i>parent</i>	Parent to ask.
---------------	----------------

Returns

Number of children.

3.16.3.4 void cvforge.FilteredTreeModel.setFilter (String filter)

Set new String for filtering nodes.

Will be cast to lowercase!

Parameters

<i>filter</i>	
---------------	--

3.16.4 Member Data Documentation

3.16.4.1 String cvforge.FilteredTreeModel.filter [protected]

String for filtering.

Only nodes containing the filter String are displayed. Keep filter at "" to disable filtering.

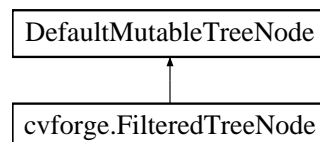
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/FilteredTreeModel.java

3.17 cvforge.FilteredTreeNode Class Reference

Filtered node.

Inheritance diagram for cvforge.FilteredTreeNode:



Public Member Functions

- [FilteredTreeNode](#) ()
Construct empty node.
- [FilteredTreeNode](#) (Object userObject)
Construct node with given userObject.
- [FilteredTreeNode](#) (Object userObject, boolean allowsChildren, String filter)
Construct node with userObject and filter term.
- [TreeNode](#) [getChildAt](#) (int index)
Get child at given index.
- int [getChildCount](#) ()
Count number of children.
- void [setFilter](#) (String filter)
Sets String for filtering.

Protected Member Functions

- void `determineVisibility()`
Check if node is filtered and set visibility status.
- boolean `isVisible()`
Check if node is supposed to be shown.

Protected Attributes

- String **filter**
- boolean **visible**

3.17.1 Detailed Description

Filtered node.

Checks if node (or its String representation) contains the filter term. Only hides leaves. Overwrite `determineVisibility()` to alter this behavior. UserObjects are cast to string before applying the filter.

3.17.2 Constructor & Destructor Documentation

3.17.2.1 `cvforge.FilteredTreeNode.FilteredTreeNode (Object userObject)`

Construct node with given userObject.

Parameters

<i>userObject</i>	
-------------------	--

3.17.2.2 `cvforge.FilteredTreeNode.FilteredTreeNode (Object userObject, boolean allowsChildren, String filter)`

Construct node with userObject and filter term.

Parameters

<i>userObject</i>	UserObject contained in node.
<i>allowsChildren</i>	Set true, if this is a leaf.
<i>filter</i>	Filter term.

3.17.3 Member Function Documentation

3.17.3.1 `TreeNode cvforge.FilteredTreeNode.getChildAt (int index)`

Get child at given index.

Excludes invisible nodes.

Parameters

<i>index</i>	Index of node.
--------------	----------------

3.17.3.2 `int cvforge.FilteredTreeNode.getChildCount ()`

Count number of children.

Excludes invisible nodes.

3.17.3.3 boolean cvforge.FilteredTreeNode.isVisible () [protected]

Check if node is supposed to be shown.

Returns

true, if node is not leaf, filter does not exist or filter string contained in object.

3.17.3.4 void cvforge.FilteredTreeNode.setFilter (String filter)

Sets String for filtering.

Iterates over children and sets their filter.

Parameters

<i>filter</i>	String for filtering node userObject.
---------------	---------------------------------------

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/FilteredTreeNode.java

3.18 cvforge.InputHelpers Class Reference

Helper methods which create GUI input elements like ComboBoxes and Textfields.

Static Public Member Functions

- static Object [stringToPrimitive](#) (String src, Class classType)
Convert String to given primitive class type (String included).
- static String [limitLength](#) (String src, int limit)
Limit the length of the input String down to 15 characters.
- static String [limitLength](#) (String src)
- static JComboBox< String > [createMatBox](#) ()
Create input ComboBox for ImageJ images.
- static JComboBox< String > [createRoiBox](#) ()
Create JComboBox for selecting ROIs created in ImageJ.
- static JComboBox< String > [createBoolBox](#) ()
Create a JComboBox of boolean values.
- static JComboBox< String > [createCacheBox](#) (Class classType)
Create a JComboBox referring to Objects in the cache.
- static JComboBox< String > [createClassBox](#) (Class[] classes)
Creates a JComboBox containing the simplified names of given classes.
- static JComponent [createInputElement](#) (Class classType)
Creates an a JComboBox or TextField, depending on the given Class.
- static String [getText](#) (JComponent comp)
Extract the text from a JComponent.
- static Object [createFromInput](#) (JComponent comp, Class classType)
Creates an Object of given Class from a component.

Static Protected Attributes

- static final String **CVMAT** = "org.opencv.core.Mat"
- static final String **CVMATOFBYTE** = "org.opencv.core.MatOfByte"
- static final String **CVKEYPOINT** = "org.opencv.features2d.KeyPoint"
- static final int **BOXSIZE** = 5

3.18.1 Detailed Description

Helper methods which create GUI input elements like ComboBoxes and Textfields.

3.18.2 Member Function Documentation

3.18.2.1 static JComboBox<String> cvforge.InputHelpers.createBoolBox () [static]

Create a JComboBox of boolean values.

Returns

JComboBox with boolean values.

3.18.2.2 static JComboBox<String> cvforge.InputHelpers.createCacheBox (Class *classType*) [static]

Create a JComboBox referring to Objects in the cache.

Only classes of given Class are included.

Parameters

<i>classType</i>	Only classes of this Class are to be included in the resulting JComboBox.
------------------	---

Returns

Constructed JComboBox with references to cached Objects.

3.18.2.3 static JComboBox<String> cvforge.InputHelpers.createClassBox (Class[] *classes*) [static]

Creates a JComboBox containing the simplified names of given classes.

Parameters

<i>classes</i>	Classes to be used for JComboBox.
----------------	-----------------------------------

Returns

Created JComboBox.

3.18.2.4 static Object cvforge.InputHelpers.createFromInput (JComponent *comp*, Class *classType*) [static]

Creates an Object of given Class from a component.

Either converts text input into a String or a Primitive, or looks it up in the cache.

Parameters

<i>comp</i>	JComponent to extract value from.
<i>classType</i>	Class to convert extracted value into.

Returns

Created Object.

3.18.2.5 static JComponent cvforge.InputHelpers.createInputElement (Class *classType*) [static]

Creates an a JComboBox or TextField, depending on the given Class.

For everything other than Primitives, a JComboBox referring to the cache is created.

Parameters

<i>classType</i>	Class for which the input element is to be created.
------------------	---

Returns

Created input element.

3.18.2.6 static JComboBox<String> cvforge.InputHelpers.createMatBox () [static]

Create input ComboBox for ImageJ images.

Returns

3.18.2.7 static JComboBox<String> cvforge.InputHelpers.createRoiBox () [static]

Create JComboBox for selecting ROIs created in ImageJ.

Returns

3.18.2.8 static String cvforge.InputHelpers.getText (JComponent *comp*) [static]

Extract the text from a JComponent.

Only works for JTextField and JComboBox this far.

Parameters

<i>comp</i>	JComponent from which the text is to be fetched.
-------------	--

Returns

String extracted from the component.

3.18.2.9 static String cvforge.InputHelpers.limitLength (String *src*, int *limit*) [static]

Limit the length of the input String down to 15 characters.

Parameters

<i>src</i>	String to be shortened.
------------	-------------------------

Returns

Shortened String.

3.18.2.10 static Object cvforge.InputHelpers.stringToPrimitive (String *src*, Class *classType*) [static]

Convert String to given primitive class type (String included).

If conversion to primitive is not possible, return null.

Parameters

<i>src</i>	String to be converted
<i>classType</i>	Class to which <i>src</i> is to be converted.

Returns

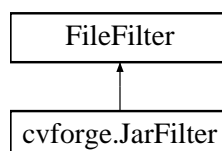
Converted Primitive/ String.

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/InputHelpers.java

3.19 cvforge.JarFilter Class Reference

Inheritance diagram for cvforge.JarFilter:

**Public Member Functions**

- boolean **accept** (File *f*)
- String **getDescription** ()

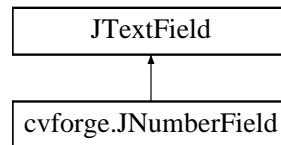
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/JarFilter.java

3.20 cvforge.JNumberField Class Reference

TextField accepting floating point numbers only.

Inheritance diagram for cvforge.JNumberField:



Classes

- class **NumberDocument**
Used internally to limit input to numbers.

Public Member Functions

- [JNumberField](#) ()
Construct [JNumberField](#) with start value 0.0.
- [JNumberField](#) (double value)
Construct [JNumberField](#) with given double start value.
- boolean [isValid](#) ()
Redundant.
- double [getValue](#) ()
Get parsed double value.

Protected Member Functions

- Document [createDefaultModel](#) ()
Internal document creator.

3.20.1 Detailed Description

TextField accepting floating point numbers only.

3.20.2 Constructor & Destructor Documentation

3.20.2.1 cvforge.JNumberField.JNumberField (double value)

Construct [JNumberField](#) with given double start value.

Parameters

<i>value</i>	
--------------	--

3.20.3 Member Function Documentation

3.20.3.1 double cvforge.JNumberField.getValue ()

Get parsed double value.

Returns

Parsed double value.

3.20.3.2 boolean cvforge.JNumberField.isValid ()

Redundant.

Check if currently entered value is valid double.

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/JNumberField.java

3.21 cvforge.LibTreeBuilder Class Reference

Static Public Member Functions

- static JTree [generateLibTree](#) (String path, ClassLoader loader, boolean shardsOnly) throws Exception
Generate a tree of methods in library of given path.
- static JTree [generateLibTree](#) (String path, ClassLoader loader) throws Exception
Generate a tree of methods in library of given path.
- static String [getLibName](#) (String libPath)
Returns name of library.

Static Protected Member Functions

- static DefaultMutableTreeNode [findChild](#) (DefaultMutableTreeNode root, String childName)
Find childnode of root with fitting name.

3.21.1 Member Function Documentation

3.21.1.1 static DefaultMutableTreeNode cvforge.LibTreeBuilder.findChild (DefaultMutableTreeNode root, String childName) [static], [protected]

Find childnode of root with fitting name.

Uses breadth-first search.

Parameters

<i>root</i>	Root node for starting search.
<i>childName</i>	String containing name of node.

Returns

Matching node if any, null else.

3.21.1.2 static JTree cvforge.LibTreeBuilder.generateLibTree (String path, ClassLoader loader, boolean shardsOnly) throws Exception [static]

Generate a tree of methods in library of given path.

Methods are listed by subpackages and only included if they are public static void. Each node of the tree contains the name of the method/ package/ class as a string.

Parameters

<i>path</i>	Path to jar file.
<i>loader</i>	ClassLoader to use.
<i>shard</i>	Restrict loading to shards if true.

Returns

JTree representing the library.

3.21.1.3 static JTree cvforge.LibTreeBuilder.generateLibTree (String *path*, ClassLoader *loader*) throws Exception [static]

Generate a tree of methods in library of given path.

Do not load shards. Methods are listed by subpackages and only included if they are public static void. Each node of the tree contains the name of the method/ package/ class as a string.

Parameters

<i>path</i>	Path to jar file.
<i>loader</i>	ClassLoader to use.

Returns

JTree representing the library.

3.21.1.4 static String cvforge.LibTreeBuilder.getLibName (String *libPath*) [static]

Returns name of library.

Basically just looks up what's in between the last occurring "/" and "." symbols.

Parameters

<i>libPath</i>	Path to java library file.
----------------	----------------------------

Returns

Name of the library.

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/LibTreeBuilder.java

3.22 Main Class Reference

Launcher for running/ testing in IDE.

Static Public Member Functions

- static void **main** (String[] args)

3.22.1 Detailed Description

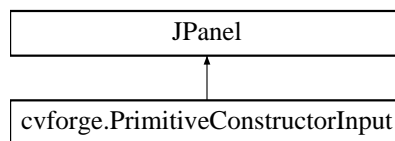
Launcher for running/ testing in IDE.

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/Main.java

3.23 cvforge.PrimitiveConstructorInput Class Reference

Inheritance diagram for cvforge.PrimitiveConstructorInput:



Public Member Functions

- void **createParameterList** (Constructor cons)
- Object **getObject** ()

Protected Attributes

- Constructor **constructor**
- ArrayList< JTextField > **inputs**

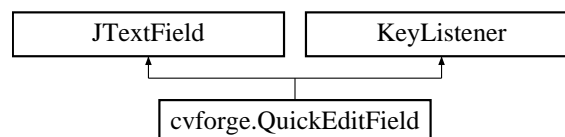
The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/PrimitiveConstructorInput.java

3.24 cvforge.QuickEditField Class Reference

TextField accepting numbers only.

Inheritance diagram for cvforge.QuickEditField:



Public Member Functions

- void **keyPressed** (KeyEvent e)
- void **keyReleased** (KeyEvent e)
- void **keyTyped** (KeyEvent e)

3.24.1 Detailed Description

TextField accepting numbers only.

The documentation for this class was generated from the following file:

- C:/Users/Jan Martens/Desktop/Projects/CVForge_/src/cvforge/QuickEditField.java

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